The Dialogic Imagination of Practice;

On Formation of Collective Meaning in Organizations

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Abstract

This paper explores organizational becoming as a process of dialogic imagination of practice. Experiences from the organic growth process of a professional service firm form the basis for re-conceptualizing becoming as a duality between practice and meaning, fueled by a set of acts. We focus on boundary objects representing those acts and the reflexive field they constitute. Two successful projects stand out as having decisive influence in the becoming of our case firm. They seem particularly valuable as learning experiences because of four qualities: (1) grounding in core practice, (2) authorization by lead users, (3) resonance in identity, and (4) generation of new ideas. We argue that it is useful to think of these qualities as dialogic relations constituting strong fields of collective meaning. Patterns of management style and the introduction of a metaphor of the indomitable Gauls seem to possess similar qualities. Expressions of experiences enter a field of signifiers, a field whose collectivity is made of intersubjective and intertextual relations. This field stretches backwards and forward in time and may at any moment, by certain types of acts, reconfigure.

a crystal willow, a poplar of water,
a tall fountain the wind arches over,
a tree deep rooted yet dancing still,
a course of a river that turns, moves on,
doubles back, and comes full circle,
forever arriving
Octavio Paz, Sunstone

DOUBLING BACK

This is a case study of acts of becoming within the context of a professional service firm (PSF). We base our discussion on a set of significant, as perceived by organizational members, acts taking place during a 10 year period of organic growth. The nature of work in this organization accentuate the processes by which identity and strategy formation - *organizational becoming* - originate from emergent and distributed practice. At a general level our research addresses the larger question of how social practices constitute fields of collective meaning in organizations, and how such fields of meaning in turn influence social practice. Rather than focusing on development of organizational knowledge, strategy or identity in isolation, or as sharply distinct phenomena, we suggest thinking in a set of other terms. Following Sztompka (1991) and Pettigrew (1992), we see social becoming as being fueled by the duality of practice and meaning. We will talk of acts, their situation, their representations and the interpretative process that constitutes strong fields of collective meaning; the dialogic imagination of practice.

The focus on processes of organizational interpretation, sensemaking and the construction of meaning is not new in itself. It follows a general narrative and linguistic turn in organization theory (Gabriel, 1995; Boyce, 1996; Czarniawska 1997; Alvesson 2000). Our contribution lies in changing the focus from the narratives themselves to the dialogic context in which they are authored and told. This *dialogicity*, and here we rely heavily on the work of Bakhtin (1981; 1984; 1993) and Taylor (1985), is what enables us to talk of fields of meaning as a collective

phenomenon situated both in practice and time. There is a tendency to emphasize the retrospective nature of interpretive processes in organizations, as for example in the inspiring work of Karl Weick (1995). We argue that fields of meaning as a temporal structure stretch out both in the present of times past and times future. The dialogic imagination of the future is always, to some extent, also a collective remembering of the past, and vice versa. Seen from that perspective, identity work and strategizing overlap.

The study is based on open-ended interviews, participant observation and document analysis. The overall research approach is what we may call a meso-level discourse analysis (Alvesson and Karremann, 2000) within the interpretive tradition (Heracleous and Barrett, 2001), focussing on how acts of becoming and their representations generate patterns of intersubjective and intertextual relations. We are generalizing to a set of organizational phenomena that needs investigation, not a sample of organizations. The stories we present are co-constructed with our informants in the sense of active interviewing (Holstein and Gubrium, 1995), and we have started to reflect upon them with those same informants and with research colleagues. Please join us.

A BRIEF HISTORY OF BECOMING COMPUTAS

Computas was established in early 1985 as an offspring from the IT division of DNV (Det Norske Veritas) a major Norwegian based international maritime classification corporation. Computas was founded with a mission to build an international corporation for applied AI. This was in the middle of a worldwide wave of enthusiasm about the prospects of artificial intelligence, and around 30 AI-related research projects had been launched in Norway. Steps for immediate expansion and launch of branch offices in England and Denmark were taken during the first year, and Computas soon attained a good market position and employed 12 enthusiastic persons who worked on a range of projects, mostly within the offshore and process industries. After the promising start, Computas experienced mixed results. Most projects were development of prototypes or concept studies, often with high research content, and limited potentials for wide spread use in client organizations. Implementing the systems developed by Computas could amount to hundreds of thousands of Norwegian krones for hardware investments alone. A subsequent drop in oil prices and setback in Norwegian economy also halted growth, and Computas soon found itself scrambling by on shareholder money. By 1991 Computas still had not experienced noticeable expansion. Was it going to end up at the crowded AI graveyard, alongside a row of international expert system company failures? Shareholders had lost patience and were looking to sell. As a last resort, the board recruited a new managing director, the fourth; one more chance for the youngster.

Then something happened. Gradually Computas turned around, began improving results and expanded their operations. See the growth record in figure 1 below. Since 1992, the firm has managed 10 years of consistent growth and established itself as a leading 'knowledge engineering' company in Scandinavia with around 170 employees and ample prospects for further expansion. Why? Which acts and/or events were decisive for this process of becoming? We used that question as the starting point of open-ended interviews with six persons, all having played key roles in the growth process. Not surprisingly, there are many sets of acts and events explaining the growth, and respondents give primacy to slightly differing causal frameworks, something we will return to. But the stories they tell are generally of a complementary nature, with the same basic themes emerging. We have grouped them roughly into five parallel tracks; external factors, market focus, key projects, organization and ownership:

Turnover

Net operating results

Employees
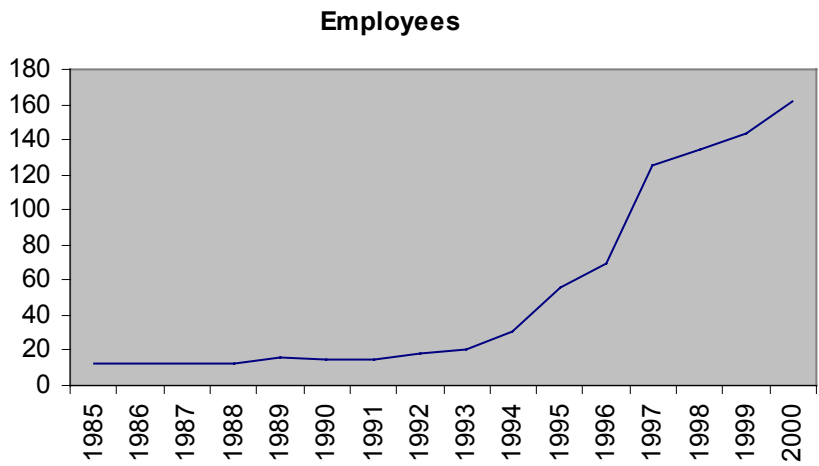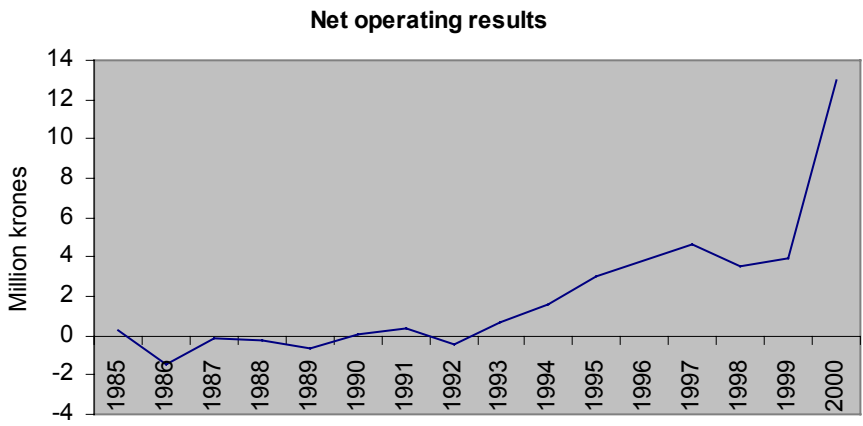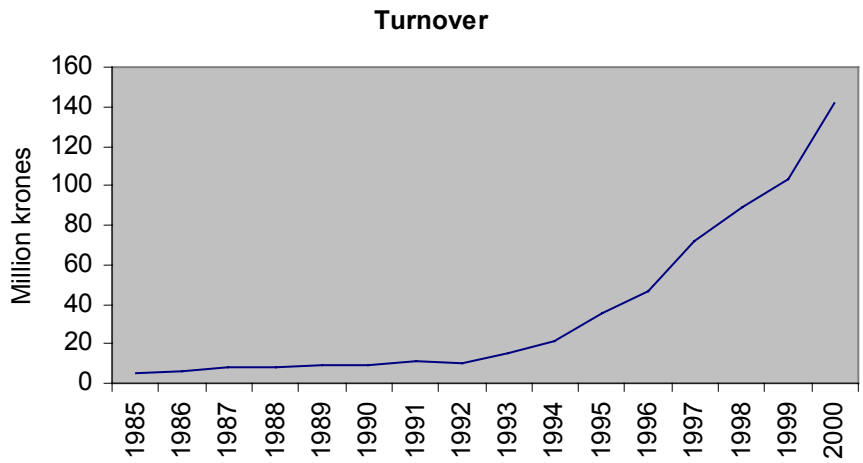
Figure 1 Growth record of Computas

1. **External factors:** Like the negative results in 1986-1990 can be regarded as partly influenced by the development in the Norwegian economy as a whole, and in particular the offshore industry, the start of the growth period of Computas more or less coincides with a general upswing in the economy. The annual increase of 50% in turnover and personnel in 1993-1997 is however unmatched by any external economic trends. Of more significance is the development in PC technology. Small Talk and Windows 3.0 paved the way for more widespread use of advanced software applications requiring a combination of heavy computations and advanced user interfaces. Computas shifted programming platform from Lisp to Small Talk in 1989 and was ready when the new technologies began to mature.

2. **Market focus:** The new managing director of Computas had a background as a strategy consultant for public sector agencies, and was a salesman by heart. His appointment led to a drastic change in market focus, almost overnight. The majority of projects in 1991, and prior to that, came from the offshore and process industries. In 1992 almost 80% of the turnover was generated from new groups of customers in the service industries and public sector, a pattern that persisted throughout the following years. This transformation in client base lead to increased visibility and new ways of attending to the market. Earlier applications developed by Computas had frequently been rather esoteric and meant for sharply defined, outside the mainstream-processes, typically handled by specialized engineers. In the words of one informant: *"The early applications were not even nice-to-have, but nice-to-do. Sure, we did exciting and potent things, but it did not take off. There was not a widespread understanding amongst us that the applications were successful for our clients."* Projects for the new set of customers were far more significant in terms of addressing everyday problems for entire business processes. The systems were implemented and used. And whereas most early applications had been one-of-a-kind, the new clients came back for more; support, maintenance, extensions and follow-up projects. It was not only a change in market segment. Computas began establishing more solid relations to its customers.

3. **Key projects:** The first of the new types of projects was initiated in 1991; *CompAns*, a system for competence analysis and determination of asininity of schoolteachers. It incorporated a wide range of rules and legislative practices and was the first use of rule based reasoning in an IT application for the public sector in Norway. CompAns was a small project and never a commercial success in terms of widespread use in school offices (who could not afford the license), but the system survived a number of demanding user tests and affirmed the belief in the uniqueness of Computas' competence. Moreover, it could be used in convincing presentations as a demonstrator of expert systems technology. CompAns led to a project for developing a time allocation system for the Police during the 1994 Olympics at Lillehammer, and more importantly, to *Helene*, a project that in terms of learning represented some of the same qualities as CompAns. Helene was about developing an application for collecting dependency allowance debt. Like CompAns, the user problem was that the type of knowledge needed to make such casework was scarce and not geographically distributed to the sites where it was needed. Helene contained explicit knowledge representation in a separate domain model and marked the first time Computas developed and used their own frame solutions (based on Small Talk), instead of relying on third party solutions. It was also the first delivery of a technology support system for casework that spanned an entire business process. As such it represented a prototype both of projects to come and of the internal work

on reuse libraries. A third decidedly vital project was Nauticus for Computas' mother organization, DNV, a multimillion krones effort that Computas helped launch and still is a main subcontractor of. Nauticus is a comprehensive integrated support system for information management of ships in its entire life cycle, a system that supplies ship owners with complete fleet information of everything from maintenance to construction. Nauticus was highly significant in terms of its volume as it engaged up to 40 Computas engineers simultaneously. It provided valuable experience in how 'knowledge management systems' can be integrated in daily operations. It also boosted development of knowledge in object oriented programming and led to the development of one of Computas' frame solutions; Brix.

4. **Organization:** A range of organizational changes has taken place at Computas since 1991. The introduction of a 'process based' organization in 1996 is often emphasized as a unique quality of the firm in external presentations and has undoubtedly been an organizational innovation that has helped managed the rapid growth. One of its many virtues is that it allows personnel to circulate in and out of processes as process owners (on a biannual basis), thus both providing a large number of employees with organizational insight and offering a horizontal career path. Our informants however pinpoint two other smaller acts as crucial in the growth process. At the end of 1993 Computas moved from its cradle, the costly premises of DNV, to new offices nearby. Three quarters of a floor at the new location was rented, with options for another quarter and the floor above it. The change of location was motivated by cost cutting (as emphasized by the managing director), but sent a strong message (as interpreted by other informants) of independence and confidence in growth prospects. The options were taken as more projects were sold, further adding to the confidence. An act with similar symbolic significance was the triumphant announcement that Computas changed its name from Computas Expert System to Computas. Seemingly trivial, the story behind it was that Computas was originally the name of the IT division of DNV. When this division was outsourced from DNV in 1987, the name followed path, and ended up as an add-on to the name of a competing Norwegian consulting firm; Cap Gemini Computas. When the rights to the name expired in the public company register, the management of Computas immediately seized it. The previous owner protested, to no avail. Again the message was clear; we are here to stay, and grow.

5. **Ownership:** From its birth Computas was owned by a group of investors and its mother company, DNV, while employees controlled around 20% of the shares. A limited stock issue was successfully carried out in 1987. After that not much happened in terms of ownership until 1994 when the investors wanted out, despite the turnaround. They had lost faith in the technological basis for Computas' mission. A fusion with a larger IT consulting firm was considered, but the management of Computas conceived that as being eaten, a total loss of identity, and worked hard to come up with a new owner. They were successful, as SDS, a publicly owned IT service firm bought 72% of the shares. At that time Computas was valued at 6.6 millon Norwegian krones. Both DNV and SDS have played dual roles as owners and key clients of Computas, decisive for competence development and growth as they alone represented the majority of the market for several years. The next change in ownership came in 1998. Cutting a long story very short, the management of Computas understood SDS as intending Computas to be their internal development division and started looking for a new owner. Turn IT, a large Swedish IT corporation bought the stocks from SDS, based on a valuation of the firm at 73.2 million (riktig??) Norwegian krones, a quite formidable number

compared to the 1994 price. This time the management secured negative control with 33% of the shares owned by employees. Another step towards independence had been taken.

One of the observations to be made from this brief history of Computas is that we see several intertwined trajectories of learning. The move towards the service industries and public sector leads to experiences not only with relation building to a new set of customers, but new types of applications (rule based reasoning in administrative processes, casework process support, knowledge management systems), 'new' underlying technologies (refinement of user interfaces, boost in object oriented programming) and new reusable frame solutions (Sara, Brix). Parallel learning takes place in the realm of organization (e.g. the process model) and handling of ownership. Each new experience opens up further opportunities, which leads to accumulation of new experiences and new paths of becoming. And so on.

Following Mintzberg and Waters (1985) we could make a good case of emergent strategies out of this story. Indeed we do see realized strategies emerging from frontline employees experimenting with new solutions, rather than being preconceived in an analytical setting. Or we could proceed in a more general direction and talk of learning as organizational search for new business. Along with Nelson and Winter (1982), and their predecessors (March and Simon, 1958, Cyert and March, 1962/1993), we could conceptualize search as contingent, accumulative and local; the probability distribution of what is found is concentrated on territories close to the current one. Computas' search for new business is highly path dependent. The result of today's searches may be both a successful new technology and a natural starting place for the search of tomorrow, and Computas develops natural trajectories of search specific to a particular application area, customer type, underlying technology or re-use library. A refinement to this line of theorizing would be to emphasize *projects* as the main mechanism for learning and search. For Computas, as for many professional service firms, projects represent the core vehicle of development. Most projects are unique to the contract, a unique constellation of personnel, objectives, clients, approaches and division of labor. Which does not mean that more repeatable patterns, or trajectories of projects, are impossible to detect. We may talk of types[1] of projects as types of collaborative patterns; mixtures of competence mediated in similar manner, addressed to similar types of demands. This semi-permanence is not formally organized but rather detected, recognized internally and externally, as recurring dialogic relationships

While all these perspectives are relevant in order to understand the practice and history of Computas, they do not do full justice to our case observations. There is much more going on here than mere learning in the sense of accumulating knowledge, much more to understand than

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[1] Engeström et al. (1999) treat work akin to the projects of Computas as *knotworking* (p. 345): "work that requires active construction of constantly changing combinations of people and artifacts over lengthy trajectories of time and widely distributed in space" and (p. 346) "a pulsating movement of tying, untying and retying otherwise separate threads of activity." While that article sees knotworking itself as the pattern, we have suggested (Håkonsen and Carlsen 1999) using the concept of *activity systems* (Engeström, 1993) from activity theory, interpreted as a culmination of what customers are willing to buy at on one side and the mobilizing of the firm's knowledge resources at the other - materialized in a recurring *project type*. Across activity-systems projects differ widely. Within one activity-system they share the same characteristics.

new ways of conceiving the relationship between acting and thinking in organizational becoming. What needs to be further illuminated is the role of identity in the organizational becoming. Let us see about that.

THE VISIONARY PRACTITIONER AND THE INDOMITABLE GAULS

There is a strong undercurrent of identity talk in several of the learning events described by our respondents. The history of Computas is a continuous struggle for survival and independence, not just in terms of economic outcome, but in keeping the dream alive, nurturing it, writing into it. The change of premises, the name change, and the struggle to find new owners, all have an obvious symbolic dimension. In interview situations, signs of high engagement are typically linked to this type of issue; pitched voice, a slight blush, leaning forward.

Projects are not just vehicles for accumulation of knowledge, but arenas for deeply satisfying play and affirmation of self. Projects are talked of with pride. They are icons. Great care is taken to name them, for example 'Helene'. Helene is a wordplay that refers to a Norwegian folk song where the figure 'Helene Harefrøken' (Helene Hare) epitomes the ultimate happy and gentle carelessness, i.e. picturing the debt collecting system as having a friendly, unthreatening personality. CompAns is mentioned with awe, talked of as an old friend, despite its modest size and lack of commercial success. When the system failed because of Y2K problems, Computas considered a free upgrade. During informal conversations at lunch time projects are discussed in terms of having a balance between 'dream' and 'calculation'. The calculation is the budget and the user requirements. The dream signifies the room to push technological boundaries, to learn, to do 'what we really want to do'. It is accepted to pursue the dream. Front-end technology that works is a value at Computas; 'we love technology, and it should both be fun and useful'. So is a certain type of eccentricity, as long as it balances with talent. Computas has had a policy of recruiting high brows, persons with research interests, nerds; the best 1-5 % of graduates, who might not all have been social stars. And there is a tune of stubbornness sounding through it all: " It *is* possible to codify most knowledge as long as you understand the activity where it is activated and model the process interactively with the users. Explicit knowledge representation in domain models *is* extremely valuable. There *is* much more codifiable routine in any activity than what is normally believed. We *are* going to re-use and further develop our own frame solutions. Artificial intelligence and expert systems *are* useful and *still* extremely potent technologies, the hype just backfired for a while."

These fragments of impressions border a caricature. Is it possible to arrive at a more qualified understanding of the identity of Computas? Borrowing a concept from narrative identity theory (Polkinghorne 1987; Bruner 1990; Czarniawska, 1997) we may think of organizational identity as a living autobiography, a story enacted and negotiated, within the organization and between the organization and its environment. A useful metaphor, this autobiography may never be fully articulated. Stephen Crites (1971) has written beautifully about how the essence of identity is unutterable, but contained in 'sacred stories' (p.32) "For the sacred story does not transpire within a conscious world. It forms the very consciousness that projects a total world horizon, and therefor informs the intention by which actions are projected into that world. The style of these actions dance to its music." The sacred story is never told, only heard through how 'mundane' stories resonate in it. Some mundane stories sound out greater depths than others. If there is such a thing as a sacred story of Computas, the following excerpt from on of our interviews might point towards it:

R: I just recalled another example that I believe has had a significant impact on our self-image, a bit on the trivial side perhaps. It happened in a meeting with our largest customer so far, with the project manager of Nauticus, before it was called Nauticus. It was a formidable surprise that anyone would actually give us such a large project at that time. It was without comparison, by many miles, the largest project we had ever had until then. What happened in this meeting …we had regular Monday meetings between DNV and Computas at that time, they are still held …it could have been in the mid 90-ties, was that Elling Rishoff gave us a metaphor. He said he pictured Computas as the little village of the indomitable Gauls in Asterix.

I: Hmm!!??

R: You, know, that little village of Gauls. I do not know if everybody in Computas has heard about it [the metaphor], but many have had it in the back of their minds, sort of, both when they have made decisions and when they have thought about their own job, their role here.

I: What does it mean that you are the village of the Gauls, what do you put into it (laughter)?

R: Well, it means standing in opposition to everything established, having magicians who can grant everyone of us with something that makes us invincible and indomitable, like that magic potion (laughter).

I: (chuckling) …and what *was* the magic potion then?

R: At that time we spoke a lot about our reuse libraries, our reuse ontologies, our concepts, I would say. Both the technologies, the quite heterogeneous stuff we had of reusable technology at that time, and the way we were thinking, were easy to conjure as our magic potions. And in particular this audacity, this cheek…

I: … the lack of fear?

R: …the courage to face all the roman legions by a force of twelve persons, you know

I: Who are the roman legions then?

R: It is everyone we equate with established power and economic might, the large players in the IT industry for example. So that village of the Gauls; many of us thought in those terms when we won the Arena project contract for Arbeidsdirektoratet

I: That huge contract [125 million krones] you got in the beginning of last year?

R: Yes. Events like that reinforce our self-image...

I: …and perhaps the Boeing contract also then?

R: Yes, absolutely, absolutely.

I: Because it is way beyond normal possibilities for such a small company?

R: Yes, exactly. (…) I believe that some of these metaphors that has been thrown into our lap have been important for a lot of things, also for those who have not heard of them, because they have modulated the decision makers way of thinking; thinking about management, thinking about the distribution of our ability and will to lead, to make decisions.

(…)

I: But what Elling was on about, did it articulate a feeling that had been there for a long time, although unspoken, or did it create any new understanding? What function did the introduction of this new metaphor have?

R: It had the function that everybody in that meeting instantly recognized the metaphor as apt, as *us*, but of course once you establish such a recognition someone will take it and use it and change the self-image. It is an interaction between a starting point, where the metaphor is close enough to seize it, and what happens once it is launched. It is not static. It is not so that you just take that metaphor and adopt it because it fits and then sail nicely along with it as if.., something new happens down the line.

In the light of the Indomitable Gauls metaphor, the perceived stubbornness of Computas personnel, and the almost religious belief in explicit knowledge domain models and their own frame solutions, makes perfect sense. It represents their magic potion, what they use to beat the roman legions. Cast in this light, recruitment policies equate to finding a mixture of eccentric, but fearless warriors and future magicians. Straightforward middle of the road programmers will not do. Likewise, the celebration of key projects represents the salutation of victories in an ongoing drama; the dual battle against the roman empire and the quest to fulfill the prophesies of the knowledge economy.

Even the entry of the new managing director could be seen as having this double quality of rationality and mythic drama. One the one hand he demonstrates traits as a salesman, relationship builder and down to earth practitioner. He prefers concrete acts to lofty plans. He starts to focus on next month's earnings when he arrives, not next year's earnings. He emphasizes (with good reason) the economic motivation for moving from the cradle at DNV, not the symbolic significance of it. When the engineers in Computas spends weeks specifying the need for a photocopier at 100 000 krones, he buys a used one for 3000. Other informants, on the other hand, frequently refer him to as a 'visionary practitioner'. And he has interesting things to say about the need to understand questions of identity:

> I worked hard to understand what this company was about. What were the goodies of the company, what was its essence? Fancy market plans and the kind have no purpose unless you find out who you are. So I used a lot of time on that. I did it by trying to observe what they [the engineers] were doing – it was very hard to get them to communicate that. I asked them time and time again; 'What is it that you are actually doing? What are you producing.' But they never had enough time to train me in the practice of doing project work.. So the way I learned it was to try to present the firm myself, make my own foils and use them during client visits. I learned a lot by having for example Roar join me in client meetings and observe how he presented us, and by participating in discussions. But I believe it took a year before I attained a *reasonable* understanding of what this is about. It took a long time. It is interesting. We are still not very good at communicating what we are doing, although there has been a lot of improvement.
>
> (…)
>
> We have to understand our distinctiveness. Any decision must take that as a starting point: What do we really *yearn* to do? Where are our *desires*? What is our unique competence? I have no faith in thinking about employees as elements of a machine. We fail the most when we pursue opportunities we are not sufficiently motivated for

'It took a year before I attained a *reasonable* understanding of what this is about'. We are talking about a company of 12 persons, not a major corporation. A year. Nothing less. Maybe that is what it takes to understand opaque practice and deep rooted dreams well enough to be able to

play on a full range of meanings. Maybe that is what it takes to manage the drama of organizational becoming. Whatever the answer, identity is clearly a key theme in the becoming of Computas. We need to take a more principal look at how it qualifies as a collective field of meaning.

FIELDS OF MEANING

The narrative is a primary meaning-making tool in culture, the mediator between individual sensemaking and collective beliefs, canons and perspective. We use narratives to organize our experiences so that we can tell others about it and initiate dialogue. As narratives represent knowledge (Bruner 1986, 1990, Orr, 1990) and carry identity in organizations (Czarniawska 1994; 1997), they also embody strategies (Barry and Elmes, 1997; Carlsen and Gudmundsdottir, 2001). Human sensemaking of strategic change is inherently narrative, and acts achieve their meaning as strategic by constituting or fitting into a story. That said, there are choices in the way we view narratives as signifiers of meaning. We suggest changing the focus from the narratives themselves to the dialogic context in which they are authored and told.

The term 'fields of meaning' is inspired by the work of the philosopher Charles Taylor (1985). He writes of the need to distinguish between an object, the 'carriers' or signifiers of meaning, and its interpretation. This interpretation is always relative to something, placed within a field, related to other units of meaning. It is only through such embodiment in a field of signifiers that we can speak of coherence or its absence. And meaning is always linked to a subject. It is for or by someone. This line of theorizing parallels Mikhail Bakhtin's (1981; 1984; 1986) work on dialogicity (Bakhtin and Taylor do not, to our knowledge, refer to each other). To Bakhtin every utterance, every act of understanding, every unit of meaning, and indeed the construction of self as a reflexive project, is through and through dialogic. His world of dialogicity calls attention to the multiple styles, plural voices, addressivity and intertextuality inherent in every use of language. Utterances are always unique to a specific dialogic chain, but at the same time borrow repeatable features from speech genres and the intentions of others. Bakhtin's universe thus complements the work of Taylor. When Taylor says that meaning is always by for someone, a parallel Bakhtinian treatment would stress that this someone is dividable into a speaking subject, the voices ventriloquated through this subject ('each word laid down is half someone else's') and the addressee of the utterance.

How does this make sense of the becoming of Computas? CompAns and Helene are the two acts of becoming most frequently and emphatically referred to by our observers, as being decisive for the development of Computas. Why? They are not huge in terms of volume. What qualities do these projects have as acts in terms of generating collective meaning? The possible explanations offered seem to fall in 4 categories:

1. <u>Grounding:</u> It all started from practice. These were not far-fetched stories of 'could have been'-s or 'should have been'-s. The projects offer rich accounts of successful work experiences as a basis for experiential learning, work experiences taken from the core of the practices at Computas. CompAns was a first use of rule based reasoning in an IT application for the public sector in Norway. Helene demonstrated a number of firsts; (1) explicit knowledge representation in a separate domain model, (2) use of in-house frame solutions, and (3) delivery of a technology support system for casework that spanned an entire business process.

2.   Authorizing: Both projects were recognized by funding clients (both public sector agencies) as remarkably useful and satisfying, a marked contrast to stories of failure of elaborate IT-systems in general and AI based systems in particular. The applications that were developed survived a number of demanding tests. This response both authorized the competence used in the projects and the mission of the firm in general.

3.   Resonating: Both projects resonate closely with recognizable themes in the identity of Computas. As exemplified by a quote from one of our informants: *'For the first time we had some applications that actually fulfilled and demonstrated our vision. Not only were they useful and quite unique at that time, but they represented just they kind of work we really wanted to do. This gave an enormous boost to our confidence'.* The indomitable Gauls had won their first major victories.

4.   Generating: The projects function as eye openers both internally and externally. The solutions were used in a number of market demos, and both led to several new contracts. Future uses were imagined around several dimensions of the practice; rule based reasoning in business processes, workflow models and re-use libraries. Through the projects the practice of Computas is conjured up into alternative growth trajectories. Taking this a step further in generalization we may say that the experiences is *played* with in a Barthesian (1981, 1989) sense, that is not only consumed as final, but written into and used as nucleus for further imagination of practice.

The regularities we seek to uncover are dialogical relationships made through use of language; intertextually and intersubjectively. The stories of CompAns and Helene and the accompanying computer models are boundary objects that may or may not signify meaning. The four explanatory categories equate to links in dialogic chains, a set of dialogues bumping up against each other. It is a dialogue with practice, a dialogue with current users, a dialogue with identity and a dialogue with new users and new fields of use. The strength of the fields of meaning created by these projects is a function of the strength of these dialogues in terms of intensity and how many persons that are involved. Figure 2 below illustrates the general points we are trying to make.
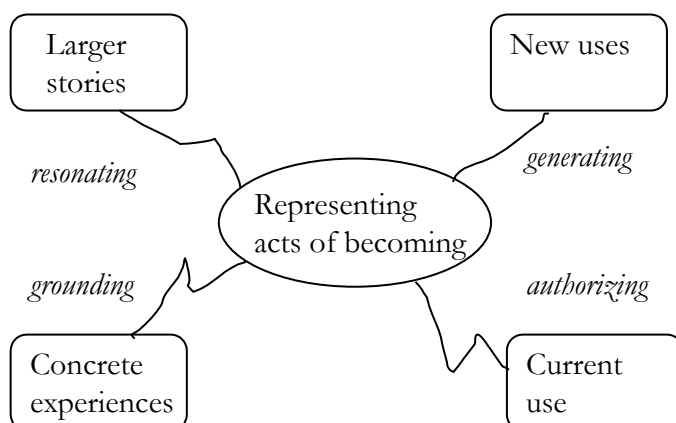
Figure 2 Boundary objects and their dialogic relations

Does this conception of collective meaning hold up against other observations from the story of Computas? Yes, and no. Some acts of becoming activate only one or two of these dialogic chains. The change of name generates meaning first and foremost in terms of resonating in identity. The move to new locals are, in addition to playing on identity, also grounded in practical considerations and taken as opening up the door for further growth, thus constituting meaning by a generative dialogic chain. We could also see the entire communicative pattern stemming from the acts of the managing director as fitting neatly into this model. From the very beginning he make a conscious effort to ground his leadership in a thorough understanding of the practice and identity of Computas. He also facilitates a strong dialogic relationship with current and new users of Computas' services, and he partakes in the dialogue that visions a new range of service and clients for the firm.

There is more to say about becoming and collective meaning in Computas and generally. There is a further complication; time.

TIMES PAST AND TIMES FUTURE

We have so far touched lightly upon one of the key qualities of both meaning and becoming, its temporal structure. There is a time of the clock and one of human interpretation. It is a big issue that many great thinkers have struggled with. Perhaps Augustine phrased it best in his concept of inner time as he concluded from his classical discussion in *Confessions* (Augustine, 397-400/1998, p 235): "What is by now evident and clear is that neither future nor past exists, and it is inexact language to speak of three times – past, present and future. Perhaps it would be exact to say: there are three times, a present of things past, a present of things present, a present of things to come. (…) The present considering the past is memory, the present considering the present is immediate awareness, the present considering the future is expectation."

Why is this relevant? Trying to read fields of meaning constructed in Computas during its process of becoming is of course an activity of recollection, a present of the past. But a recollection of the past never takes place outside the scope of one's interest in the future, as the activities of remembering and anticipating always follow each other, at a tension (Crites, 1986). It is an important point because we may think of the fields of meaning constituted during a process of becoming as being more or less stable. The typical treatment of this in mainstream organization theory is that identity as a field of meaning is more stable and strategies less so. In its most functionalist formulation (Albert and Whetten, 1985, Collins and Porras, 1984) this equates to viewing identity as the central, enduring and distinctive character of an organization. More recent research admits to changes in identity and the possibility of many competing and fragmented identities (Albert, Ashforth and Dutton, 2000; Whetten and Godfrey, 1998). Alvesson and Kärremann (2000) goes a step further in using the term *identity work*, a heritage from insights within ethnomethodology (Garfinkel 1967; Wieder 1974) where social norms as the equivalent of collective meaning is treated as an ongoing accomplishment.

In the light of this brief glimpse of identity theory we may then ask if the identity of Computas changed during its process of becoming. Are there aspects of identity treated as collective meaning that remained more stable than others? Etienne Wenger (1998) has conceptualized identity as the mirror image of practice. It is both a reflection of yesterday's practice in terms of learning trajectory, of today's practice in terms of participation and negotiation, and of tomorrow's practice in terms of imagination and alignment. You are what you did, you are what

you are doing and you are what you search for. Viewed from this perspective we may say that the identity of Computas indeed must have changed. Table 1 below shows how talk of practice in general terms as documented in the annual report from the board has changed considerably over the years. There is a move from accentuating AI and expert systems, to including other technologies (object oriented programming and user interfaces) and re-use libraries. And there is a move towards a broader orientation of supporting work processes and knowledge management in a wide sense.

Table 1 General terms for practice in the annual report from the board of Computas

1985	artificial intelligence, expert systems
1986	--- [no such terms used, only applications]
1987	applied knowledge technology, knowledge technology and expert systems
1988	--- [not available]
1989	knowledge technology and knowledge systems
1990	knowledge management and knowledge technology, intelligent add-ons
1991	knowledge management and knowledge technology
1992	expert based systems, knowledge based systems
1993	--- [no such terms used, only applications]
1994	--- [no such terms used, only applications]
1995	object oriented programming (OO), artificial intelligence (UI)
1996	knowledge management; object oriented programming (OO), artificial intelligence (AI) and user interface (UI) as 'core technologies'; knowledge based systems (KBS), technology support for work processes
1997	[as for 1997]
1998	technology supported knowledge management (English term in parenthesis); knowledge technology; 'knowledge systems'; three sets of 'frame solutions' (re-usable) based on Java, Microsoft and Smalltalk; three 'core technologies' – object oriented programming (OO), artificial intelligence (AI) and user interface (UI)
1999	'products and services for IT-enabled knowledge management, i.e. activities for finding, representing, using and maintaining knowledge in a firm', 'knowledge products and service for the new network economy, including e-commerce'; applied knowledge technology and object oriented programming, Knowledge based engineering (KBE); Java-, Microsoft- and Smalltalk-technology as frame solutions
2000	[as for 1999, with some additions], productification, intellectual capital, 'experience and reuse-library'

One might object that this is a poor representation of practice, but it is as a data set a consistent string of utterances, with stable intention and addressivity. And the impression of change is corroborated by the tales of learning from key projects.

What then about the aspects of identity pictured in the discussion of the metaphor of the indomitable Gauls? One could argue that the core values of the firm – like the love of technology, the belief in explicit knowledge representation, and the sense of self as a challenger - have not changed. Many elements of the dream that conceived Computas have stayed the same. The least we can say then is that we are dealing with a field of meaning whose temporal structure is not uniform. But viewing even these elements of identity as totally outside the realm of social construction is highly problematic, also in more practical, functional terms. Remembering the past serves a strong human need for continuity (Crites 1986), but what may look smooth and well ordered retrospectively, after years of sensemaking, may hide what came close to a shift in interpretive scheme. Acts of becoming not only resonate in existing identities, they may reconfigure the field of meaning identity is a part of. We may speculate that the experiences of CompAns and Helene bordered such a reconfiguration.

The story of Computas is still being written. As of today, it seems that new chapters might involve international expansion and the growth of a possible product division as a new activity system. It is a growth trajectory whose negotiation will not only involve financial, technical and market consideration, but also issues of identity. The dialogic chain activating identity work could thus increasingly take the character of collective imagination of the future versus collective remembering of the past. Will recalling the image of the indomitable Gauls help Computas enter new business areas, new ways of working? Will a smooth extension of existing identity suffice? Viewing identity as an ongoing accomplishment, not an enduring core, emancipates us to see that our acts may initiate deep imagination that enable us to double back and move on.

FOREVER ARRIVING

Imagine you work in a software firm in 1991, as one of twelve gifted persons. You started the firm based on a dream of rapid expansion, and you have worked hard for six years without getting anything near the results you once hoped for. Your owners have almost lost faith, and you are starting to wonder if you will ever be more than just those twelve stubborn enthusiasts, or if the firm will survive at all. Then there is a change. A new managing director and two projects. The projects are about developing just the kind of applications you based your dream on, and the users are more than satisfied. What you are doing and your sense of self as a collective are affirmed. A number of opportunities for growth materialize, new paths open up. The dream is brought back. Imagine that. What kind of process is that, what kind of field of meaning is constituted and how?

We have argued that the growth history of Computas can be read as a dialogic imagination based on acts of becoming. These acts, and their representations, constitute strong fields of collective meaning through establishing four sets of dialogic relationships: 1) grounding in core practice, (2) authorization by lead users, (3) resonance in identity, and (4) generation of new ideas. A field of collective meaning is plural. It is a variety of interpretative levels, a multidimensional weave of meanings that do not come clearly segregated into a priori categories, with neat labels attached to them. 'Strategy', 'knowledge' and 'identity' are examples of abstractions whose labels may be retrospectively assigned to or derived from such a weave. The parts of this weave that we call

'identity' stand out as being the area around which everything else may reconfigure. It is far from static. The need for continuity in remembering should not be imposed on the imagination of what could be. The two key projects of Computas may be seen as acts of becoming that changes both the recollections of the past and the expectations for the future. The fields of meaning that are constituted are thus dialogic twice over; in the chains of dialogues radiating from the acts of becoming, and in their temporal structure.

There are limits to the kind of generalization we should do from the growth story of Computas. The practice of Computas has a certain set of characteristics commonly attributed to professional service firms, or so-called knowledge intensive firms (Starbuck, 1992, Blackler, 1995, Alvesson 1993, 2000). We note a (1) heavy reliance upon specialized and esoteric knowledge, (2) dominance of non-routinized and symbolic analytic work, (3) non-standardized products and services with high customer interaction, (4) competing claims of organizational identity and strategic options and (5) a high degree of coordination and communication intensity. It is a practice that is almost opaque to outsiders and one that is tightly interwoven with identity. In a sense, Computas and other professional service firms make their living from doing identity work, internally as well as externally. Identities legitimize practices as knowledge. Likewise, the acts that achieve significance in terms of creating new meaning are situated within practices that pervade perception and reflexivity of organizational members, thus also strategizing and identity work. In such a context, a single act, a single experience could be what triggers new paths of becoming, *if* it has the qualities referred to above. There is a fluidity, emergence and distribution of power in this that we would not expect to find in more traditional industries. The relationship between acts of becoming and fields of meaning may take on different patterns in an organizational setting characterized by other types of practices.

A lesson still remains though. We are forever arriving, based on what we *do*, by imagining backwards and forwards in time, with others.

the others that we all are –
when I am I am another, my acts
are more mine when they are the acts
of others, in order to be I must be another,
leave myself, search for myself
in the others, the others that don't exist
if I don't exist, the others that give me
total existence; I am not,
there is no I, we are always us,
life is other, always there,
further off, beyond you and
beyond me, always on the horizon,
       Octavio Paz, Sunstone

REFERENCES

Albert, S., Ashforth, B. E. and Dutton J. E. (2000). "Organizational Identity and identification: Charting new waters and building new bridges. Academy of Management. <u>Academy of Management Review</u>. 22: 13-17.

Alvesson, M. (1993): "Organizations as rhetoric: Knowledge-intensive firms and the struggle with ambiguity." <u>Journal Of Management Studies</u>, 30,997-1016.

Alvesson, M. (2000): "Social identity and the problem of loyalty in knowledge-intensive companies." <u>Journal of Management Studies</u>, 37, 1101-1123.

Alvesson, M. (2000): "Taking the linguistic turn in organizational research: Challenges, responses, consequences"; <u>Journal of Applied Behavioral Science</u>, Arlington; 36, 136-158.

Alvesson, M. and Karremann, D. (2000): "Varieties of Discourse. On the study of organizations through discourse analysis". <u>Human Relations</u>. Vol 53 (9), 1125-1149.

Augustine, St. (397-400/1998): <u>Confessions</u>, Chadwick (Ed). Oxford World's Classics

Bakhtin, M. (1981): <u>The Dialogic Imagination.</u> Michael Holquist (Ed.), Austin, University of Texas press.

Bakhtin, M. (1986). <u>Speech genre and other essays</u>. Holmquist and Emerson (eds), Austin, University of Texas Press.

Bakhtin, M. (1993): <u>Toward a Philosophy of the Act</u>. V. Liapunov and M. Holquist (Eds.) Austin, University of Texas Press.

Barthes, R. (1981): "Theory of the Text", In Robert Young (ed.) <u>Untying the Text: A Post-Structuralist Reader</u>, London, Routledge.

Barthes, R. (1989). "From Work to Text", In <u>The Rustle of Language</u>, Richard Howard (transl), UC Press.

Berg, P. O. (1985). Organization Change as a Symbolic Transformation Process. Organizational Culture. P. Frost, L. Moore, M. R. Louis, C. Lundberg and J. Martin. Beverly Hills, Sage.

Blackler, F. (1995): "Knowledge, Knowledge Work and Organizations: An Overview and Interpretation." <u>Organization Studies</u>, 16(6), 1021-1046.

Boyce, M. E. (1996): "Organizational story and storytelling: a critical review", <u>Journal of Organizational Change Management</u>, 9: 5-26.

Brown, A. D. (2001): "Organization studies and identity: Towards a research agenda." <u>Human Relations</u>. 54. 113-121.

Bruner, J. (1986). <u>Actual Minds, Possible Worlds</u>, Harvard University Press.

Bruner, J. (1990). <u>Acts of Meaning</u>. Cambridge, Massachusetts, Harvard University Press.

Carlsen, A. and Gudmundsdottir, S. (2001): "Stories of What Could Be. Strategic Change and The Narrative Mode of Thought". Paper presented at the Annual EGOS Conference Lyon, France, 5-7th July 2001

Collins, J. and J. Porras (1984):. <u>Built to Last</u>, Business (Century/Arrow).

Crites, S. (1971). "The Narrative Quality of Experience." <u>Journal of the American Academy of Religion</u> 39(291-311). Also reprinted in Hinchman, L.P. and Hichman, S. K. (Eds.): Memory, Identity, Community. The Idea of Narrative in the Human Sciences. State University of the New York Press. 1997.

Crites, S. (1986): "Storytime: Recollecting the Past and Projecting the Future." In <u>Narrative Psychology.</u> T. R. Sarbin. Westport, Praeger Publishers.

Cyert, R. M. and J. G. March (1963/1992). <u>A Behavioral Theory of the Firm.</u> Malden, Mass., Blackwell Publishers Inc.

Czarniawska-Joerges, B. (1994): "Narratives of Individual and Organizational identities". In S. Deetz (ed.) Communication Yearbook 17: 193-211. Thousand oaks, SAGE, CA.

Czarniawska, B. (1997). Narrating the Organization. Chicago, The University of Chicago Press.

Czarniawska, B. (1998). A Narrative Approach to Organization Studies .Qualitative Research Methods Series 43. Sage.

Engeström, Y., R. Engeström, et al. (1999): "When the center does not hold: The importance of knotworking." Activity Theory and Social Practice: Cultural-Historical Approaches. S. Chaiklin, M. Hedegaard and U. J. Jensen. Aarhus C, Aarhus University Press.

Gabriel, Y. (1995): "The unmanaged organization. Stories, fantasies and subjectivity. Organization Studies. 16: 477-501

Garfinkel, H. (1967): Studies of Ethnomethodology. Englewood Cliffs, New Jersey, Prentice-Hall.

Heracleous, L. and Barrett, M. (2001): "Organizational Change as Discourse. Communicative Actions and Deep Structures in the Context of Information Technology Implementation", The Academy of Management Journal, Vol. 44: 755-778.

Holstein, J. A. and Gubrium, J. F. (1995): "The Active Interview". Qualitative Research Methods, Vol. 37. Sage.

Håkonsen, G. and A. Carlsen (1999). Communities and activity-systems in Knowledge-intensive Firms. International Conference on Management of Information and Communication Technologies, Copenhagen, Denmark.

March, J. G. and H. A. Simon (1958): Organizations. New York, John Wiley & Sons, Inc.

Mintzberg, H. and J. A. Waters (1985). "Of Strategies, Deliberate and Emergent." Strategic Management Journal 6: 257-272.

Nelson, R. R. and S. G. Winter (1982). An Evolutionary Theory of Economic Change. Cambridge, Mass., The Belknap Press of Harvard University Press.

Orr, J. E. (1990). Sharing Knowledge, Celebrating Identity: Community Memory in a Service Culture. Collective Remembering. in D. Middleton and D. Edwards. (Eds) London, SAGE Publications: 140-169.

Pettigrew, A. M. (1992): "The Character and Significance of Strategy Process Research." Strategic Management Journal. 13: 5-16.

Starbuck, W. H. (1992). Learning by Knowledge-Intensive Firms. Journal of Management Studies, 29(6), 713-740.

Sztompka, P. (1991): Society in Action. The Theory of Social becoming. University of Chicago Press.

Taylor, C. (1985): "Interpretation and the sciences of man" in Philosophy and the human sciences: Philosophical papers 2. Cambridge, University of Cambridge Press.

Weick, K. E. (1995), Sensemaking in Organizations, Thousand Oaks, CA: Sage.

Wenger, E. (1998). Communities of practice: Learning, meaning, and identity. Cambridge, Cambridge University Press.

Whetten, D. and P. Godfrey (1998): Identity in organizations: Developing theory through conversations. Thousand Oaks, Sage.

Wieder, D. L. (1974). Language and Social Reality. The Case of Telling the Convict Code.. The Hague. Mouton Publishers.